

REMARKS

In response to the above-identified Office Action, Applicants have canceled claims 1-3, added claims 5-35, and amended the specification to correct minor typographical errors. Further, claim 4 was canceled in a prior preliminary amendment. Support for added claims 5-35 can be found in canceled claims 1-3, FIGS. 1-3 and 23-24, and at pages 7-11 and 27-35, in the above-identified application. In view of these above amendments and the following remarks, Applicants hereby request further examination and reconsideration of the above-identified application, and allowance of claims 5-35.

The Office has objected to the drawings as being informal. Applicants have not received the Notice of Draftsperson Patent Drawing Review, Form PTO 948. Accordingly, Applicants respectfully request that the Office provide a Form PTO 948. Formal drawings will be provided after receipt of the Form PTO 948 and a notice of allowance.

Additionally, Applicants also have not received an initialed copy of Form PTO 1449 submitted for the Office's consideration on July 16, 2001. Accordingly, Applicants respectfully request an initialed copy of Form PTO 1449.

The Office has rejected claim 4 under 35 U.S.C. § 112, second paragraph, asserting that the term "server/controller" is indefinite. In view of the cancellation of claim 4, the Office is respectfully requested to reconsider and withdraw this rejection.

The Office has provisionally rejected claims 1 and 2 under the judicially created doctrine of double patenting over claims 18 and 30 of copending application serial number 09/364,047. In view of the cancellation of claims 1-2, the Office is respectfully requested to reconsider and withdraw this rejection.

The Office has also rejected claims 1-4 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent Number 6,033,226 to Bullen ("Bullen"). In view of the cancellation of claims 1-4, the Office is respectfully requested to reconsider and withdraw this rejection.

As mentioned above, claims 5-35 have been added. Bullen does not suggest or disclose, “a control system configured to access ... a first set of two or more ... electronic training devices based upon ... requirements of the training exercise,” as recited in claim 5, or “accessing ... a first set of two or more ... electronic training devices based upon ... requirements of the training exercise,” as recited in claims 16 and 26. Applicants respectfully direct the Office’s attention to FIGS. 1A and 1B in Bullen, which show a computer 6 with an interface 14 that enables a user 4 to control a single machine tool 11 either in real-time or by commands issued by the training software 8. But the interface 14 is not configured to access “two or more ... electronic training devices based on ... requirements of the training exercise” since the interface 14 can only control the single tool 11 regardless of the type of training exercise being carried out.

In contrast, embodiments of the present invention enables users to control as many devices as are needed to perform an assignment, as disclosed at page 10, lines 3-13 in the above-identified application. Referring now to page 9, lines 16-17, in the above-identified application, allowing multiple devices to be accessed and controlled as are needed for a particular assignment enables embodiments of the invention to replicate real-world scenarios that other systems, such as Bullen, simply cannot. Therefore, claims 5, 16 and 26 are patentable over Bullen for the reasons mentioned above. Applicants further submit that since claims 6-15 depend from and contain the limitations of claim 5, claims 17-25 depend from and contain the limitations of claim 16, and claims 27-35 depend from and contain the limitations of claim 26, they are patentable in the same manner as claims 5, 16 and 26. Accordingly, Applicants respectfully submit that claims 5-35 stand in condition for allowance, such allowance being earnestly solicited.

Further, Bullen does not suggest or disclose, “the control system ... configured to access a second set of ... electronic training devices,” as recited in claim 6, or “accessing a second set of ... electronic training devices,” as recited in claims 17 and 27. Applicants refer the Office back to FIGS. 1A and 1B in Bullen. Again, a computer 6 is disclosed with an interface 14 that enables a user 4 to control a single machine tool 11. As set forth above in connection with claims 5, 16 and 26, Bullen does not teach or suggest a “first set of two or more ... electronic training devices,” and therefore does not teach “accessing a second set of ... electronic training devices” because there is no “first set of two or more” machine tools 11

to begin with, let alone any means for performing such accessing. Referring to FIGS. 1-2, page 8, lines 5-6, and page 10, lines 6-10, in the above-identified application, a “controller 24 may control ... pods 26 each of which may include ... user devices 40_1 to 40_3 ... [the] module permits devices to be moved between pods connected to the pod controller 24 ... If a user wishes to perform an assignment that needs four user devices ... the ... module 310 for user device 40_4 may be reconfigured to move user device 40_4 into pod 26_1.” As a result, the present invention enables “additional devices to be interconnected to the user devices in order to replicate real-world scenarios” to provide users with an authentic training environment as disclosed at page 9, lines 16-17, in the above-identified application. As such, claims 6, 17 and 27 are patentable over Bullen for this additional reason.

Still further, Bullen does not suggest or disclose, “overhead information representing a generic set of commands to control the first set of electronic training devices for the training exercise ... [and] a resource control system ... interpreting the overhead information to manipulate ... a first type and a second type of electronic training devices,” as recited in claim 7, or “overhead information representing a generic set of commands to control the first set of electronic training devices for the training exercise [and] interpreting at the resource control system the overhead information to manipulate ... a first type and a second type of electronic training devices,” as recited in claims 18 and 28. Applicants respectfully direct the Office’s attention to FIG. 1B and col. 4, lines 12-23, in Bullen. The interface 14 processes preprogrammed commands and instructions retrieved from a memory 7 of the computer workstation 6 for operating the machine tool 11, and sends suitable commands to the tool 11 for operating the machine in real-time. But these commands are particular to the machine tool 11, and therefore do not represent “a generic set of commands” as claimed in the above-identified application. Moreover, the interface 14 does not “interpret[] the overhead information to manipulate ... a first type and a second type of electronic training devices” because there is only one type of machine tool 11 disclosed in Bullen.

Applicants now direct the Office’s attention to FIG. 23 and page 29, lines 15-17, in the above-identified application. The embodiments of the present invention employs a common set of instructions that are communicated to and understood by the resource control module 2310 for controlling a number of devices 2318. Referring now to page 31, lines 1-13, in the above-identified application, an operations module 2322 calls the appropriate script for

each device based upon the instruction it receives by consulting a database 2344. Device specific details are encapsulated within the scripts. As stated at page 31, lines 1-2 in the application, the resource control module 2310 also enables new devices to be added without requiring major modifications. As a result, the present invention offers a scaleable and configurable mechanism for providing remote access and control of computing resources, and facilitates sharing one set of assets among many users in a timely manner with no manual intervention, as disclosed at page 27, lines 7-8 and lines 15-17 in this application.

In accordance with 37 CFR § 1.121, attached hereto is a marked-up copy of the changes made to the specification and claims by the current amendment. The version with markings to show changes made is located in the attached Appendix A.

In view of all of the foregoing, it is submitted that the above-identified application stands in condition for allowance and such allowance is earnestly solicited.

In the event that there are any outstanding matters remaining in the present application, the Office is invited to contact the undersigned to discuss this application.

Respectfully submitted,

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APPENDIX A

Version With Markings to Show Changes Made

In reference to the amendments made herein to the specification, additions appear as underlined text while deletions appear as bracketed text, and added claims 5-35 are enclosed within double dashes, as indicated below:

IN THE TITLE:

The original title has been deleted and replaced with the following:

SYSTEM AND METHOD FOR MANAGING TRAINING DEVICES

IN THE SPECIFICATION:

The paragraph beginning at page 3, line 4, has been deleted and replaced with the following paragraph:

A system for managing a plurality of electronic training devices includes a communication system that receives control data from at least one of a plurality of clients, the control data associated with tasks to be performed for a training exercise. Further, a control system is configured to access a first set of two or more of the electronic training devices based upon one or more requirements of the training exercise. The control system manipulates the first set of the electronic training devices according to the control data for the training exercise.

The paragraph beginning at page 3, line 11, has been deleted and replaced with the following paragraph:

A method and computer-readable medium having stored thereon instructions for managing a plurality of electronic training devices include receiving control data from at least one of a plurality of clients, the control data associated with tasks to be performed for a training exercise, accessing a first set of two or more of the electronic training devices based upon one or more requirements of the training exercise, and manipulating the first set of the electronic training devices according to the control data for the training exercise.

The paragraph beginning at page 3, line 15, has been deleted.

The paragraph beginning at page 4, line 3, has been deleted.

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The paragraph beginning at page 7, line 18, has been amended as follows:

Figure 1 illustrates a simple block diagram of a computer-based system for training relating to devices. As shown, the system preferably includes customer premise equipment 12, a communications link 14, a firewall 16, a communications line 18, a server and controller 20, a database 22, a pod controller 24, and a pod 26. The Customer Premise Equipment (CPE) 12 [preferably includes] may include a computer 28 provided with a browser program 30 and a network application program 32. The browser 30 [is preferably] may be a browser for Internet/Intranet communications, such as a Netscape Navigator™ browser or a Microsoft Internet Explorer™ browser. The network application program 32 may be a program such as TELNET. The communications link 14 [preferably] may traverse[s] the Internet or an Intra-net. The pod controller 24 may control one or more pods 26 each of which may [contain] include one or more user devices 40_1 to 40_3. In [one] this embodiment, the user devices 40_1 to 40_3 are network equipment, such as CISCO type switches or routers[. In other embodiments, these] , although the user devices 40_1 to 40_3 may be Programmable Logic Controllers (PLCs), Chemistry Equipment, or any other type of device. Further, a pod controller 24 may also control one or more infrastructure devices (not shown). These infrastructure devices provide an authentic environment for which a real world scenario may be written.

The paragraph beginning at page 8, line 12, has been amended as follows:

Figure 2[,] illustrates a simple block diagram of an embodiment with multiple pod controllers 24_1 to 24_3. In this embodiment, pod controllers 24_1 and 24_2 are behind firewall 16_1, and pod controller 24_3 is behind firewall 16_2.

The paragraph beginning at page 9, line 1, has been amended as follows:

The device control module 302 is used to control user accessible devices. It incorporates the control software that enables the pod control system to load starting configurations into the user devices, reset the user devices, and save final configurations. The control within this module [preferably is] may be high level and generic across all devices, increasing the modularity and maintainability of the overall system.

The paragraph beginning at page 9, line 16, has been amended as follows:

The infrastructure control module 308 allows additional devices to be interconnected to the user devices in order to replace real-world scenarios. These devices are part of the infrastructure and may require separate control by the pod controller 24. As such, this module 308 provides the control of the infrastructure devices that are needed to create a real-world scenario for the user. The infrastructure devices 316 are discussed in greater detail below. Further, this module, in conjunction with device, communications, control and multiplexer modules 310, permits devices to be moved between pods connected to the pod controller 24. This will be discussed in further detail below.

The paragraph beginning at page 12, line 12, has been amended as follows:

The server and controller 20 may send either static or dynamic web pages to the user's CPE 12 so that they may be displayed to the user through their browser. The content of the user interface page may [contain] include buttons and hot links for the user to invoke the device-specific operations that may be necessary to control the user devices for the purposes of accomplishing a lab or course.

The paragraph beginning at page 13, line 5, has been amended as follows:

Figure 5 provides a flow diagram for the computer based training system of Figure 1. A user initializes the system by instructing the browser 30 on his/her computer 28 to connect to the server and controller 20 (S502). The firewall 16 [is preferably] may be set up to allow the browser 30 and server and controller 20 to freely communicate. The server and controller 20 [preferably] may display[s] a page to the user requesting an account identification and password and [then] use[s] this information to determine if the user has an account (S504). Figure 6 illustrates an example html page 600 that may be displayed to a user to request a user's account identification 602 and password 604. The user can then click on the submit button 606 to submit the information once it has been entered. The user account may contain, among other things, a course for the user and course specific information. If the user has an account, the course is selected and started (S506). If the user does not have an account, he/she is directed to a page for setting up a user account (S518). For example, as illustrated in Figure 6, a user without an account identification is directed to click on a Register button 608. Figure 7 illustrates an html page 700 that may be used for setting up a user account. This page may request, for example, his/her name 702, address 704, a user name 706, and a password 708.

The paragraph beginning at page 16, line 7, has been amended as follows:

In one embodiment, a user devices 40_1 to 40_3 are CISCO-type routers and are connected to the pod controller through a COM port. In this embodiment, the pod controller 24 converts the user information from the application layer format it is received in (for example, TELNET) to a format that can be sent to the router through the router's COM port. This [is preferably] may be accomplished by the user communications module 304 of the pod controller 24.

IN THE CLAIMS:

Claims 1-3 have been canceled.

Claims 5-35 have been added as follows:

--5. (New) A system for managing a plurality of electronic training devices, the system comprising:

a communication system that receives control data from at least one of a plurality of clients, the control data associated with tasks to be performed for a training exercise; and

a control system configured to access a first set of two or more of the electronic training devices based upon one or more requirements of the training exercise, the control system manipulating the first set of the electronic training devices according to the control data for the training exercise.--

--6. (New) The system as set forth in claim 5 wherein the control system is further configured to access a second set of one or more electronic training devices based upon the requirements of the training exercise, the control system manipulating the first set and the second set of the electronic training devices for the training exercise.--

--7. (New) The system as set forth in claim 5 wherein the control system comprises a resource control system which receives overhead information from a server, the overhead information representing a generic set of commands to control the first set of electronic training devices for the training exercise, the resource control system interpreting

the overhead information to manipulate at least one of a first type and a second type of electronic training devices in the first set.--

--8. (New) The system as set forth in claim 5 wherein the at least one client comprises a computer device.--

--9. (New) The system as set forth in claim 5 wherein the first set or a second set of the electronic training devices comprise computer network components.--

--10. (New) The system as set forth in claim 5 wherein the first set or a second set of the electronic training devices execute at least one instruction in the control data.--

--11. (New) The system as set forth in claim 10 wherein the first or the second set of the electronic training devices provide one or more results of the at least one instruction execution back to the at least one client through the interface system, the interface system translating the results from a first format understood by the first set or the second set to a second format understood by the at least one client, the communication system transmitting the translated results back to the at least one client.--

--12. (New) The system as set forth in claim 5 wherein the communication system authorizes and provides the at least one client with access to the first set or a second set of the electronic training devices.--

--13. (New) The system as set forth in claim 5 wherein the communication system is operatively coupled to the at least one client by a network.--

--14. (New) The system as set forth in claim 5 wherein the interface system translates the control data from a first format understood by the at least one client to a second format understood by the first set or a second set of the electronic training devices.--

--15. (New) The system as set forth in claim 5 further comprising an infrastructure control system that communicates with the control system to enable a second set of the electronic training devices to be used with the first set for the training exercise.--

--16. (New) A method for managing a plurality of electronic training devices, the method comprising:

receiving control data from at least one of a plurality of clients, the control data associated with tasks to be performed for a training exercise;

accessing a first set of two or more of the electronic training devices based upon one or more requirements of the training exercise; and

manipulating the first set of the electronic training devices according to the control data for the training exercise.--

--17. (New) The method as set forth in claim 16 further comprising accessing a second set of one or more electronic training devices based upon the requirements of the training exercise, and manipulating the first set and the second set of the electronic training devices for the training exercise.--

--18. (New) The method as set forth in claim 16 further comprising:
receiving at a resource control system overhead information from a server, the overhead information representing a generic set of commands to control the first set of electronic training devices for the training exercise; and

interpreting at the resource control system the overhead information to manipulate at least one of a first type and a second type of electronic training devices in the first set.--

--19. (New) The method as set forth in claim 16 wherein the at least one client comprises a computer device.--

--20. (New) The method as set forth in claim 16 wherein the first set or a second set of the electronic training devices comprise computer network components.--

--21. (New) The method as set forth in claim 16 further comprising the first set or a second set of the electronic training devices executing at least one instruction in the control data.--

--22. (New) The method as set forth in claim 21 further comprising the first set or the second set of the electronic training devices providing one or more results of the at least one instruction execution back to the at least one client, the results being translated from a first format understood by the first set or the second set to a second format understood by the at least one client, the translated results being translated back to the at least one client.--

--23. (New) The method as set forth in claim 16 further comprising authorizing and providing the at least one client with access to the first set or a second set of the electronic training devices.--

--24. (New) The method as set forth in claim 16 further comprising translating the control data from a first format understood by the at least one client to a second format understood by the first set or a second set of the electronic training devices.--

--25. (New) The method as set forth in claim 16 further comprising enabling the at least one client to use a second set of the electronic training devices with the first set for the training exercise.--

--26. (New) A computer-readable medium having stored thereon instructions for managing a plurality of electronic training devices, which when executed by one or more processors causes the processors to perform:

receiving control data from at least one of a plurality of clients, the control data associated with tasks to be performed for a training exercise;

accessing a first set of two or more of the electronic training devices based upon one or more requirements of the training exercise; and

manipulating the first set of the electronic training devices according to the control data for the training exercise.--

--27. (New) The medium as set forth in claim 26 further comprising accessing a second set of one or more electronic training devices based upon the requirements of the training exercise, and manipulating the first set and the second set of the electronic training devices for the training exercise.--

--28. (New) The medium as set forth in claim 26 further comprising:
receiving at a resource control system overhead information from a server, the overhead information representing a generic set of commands to control the first set of electronic training devices for the training exercise; and
interpreting at the resource control system the overhead information to manipulate at least one of a first type and a second type of electronic training devices in the first set.--

--29. (New) The medium as set forth in claim 26 wherein the at least one client comprises a computer device.--

--30. (New) The medium as set forth in claim 26 wherein the first set or a second set of the electronic training devices comprise computer network components.--

--31. (New) The medium as set forth in claim 26 further comprising the first set or a second set of the electronic training devices executing at least one instruction in the control data.--

--32. (New) The medium as set forth in claim 31 further comprising the first set or the second set of the electronic training devices providing one or more results of the at least one instruction execution back to the at least one client, the results being translated from a first format understood by the first set or the second set to a second format understood by the at least one client, the translated results being translated back to the at least one client.--

--33. (New) The medium as set forth in claim 26 further comprising authorizing and providing the at least one client with access to the first set or a second set of the electronic training devices.--

--34. (New) The medium as set forth in claim 26 further comprising translating the control data from a first format understood by the at least one client to a second format understood by the first set or a second set of the electronic training devices.--

--35. (New) The medium as set forth in claim 26 further comprising enabling the at least one client to use a second set of the electronic training devices with the first set for the training exercise.--